

REMARKS/DISCUSSION OF ISSUES

By this Amendment, Applicants cancel claims 1-3, 5-7, 9 and 22-24 without disclaimer of the underlying subject matter or prejudice against subsequent prosecution. Applicants also amend claims 4, 8, 10, 15, 21 and 31, and add new claims 32-38. Accordingly, claims 4, 8, 10-21 and 25-38 are pending in the application.

Reexamination and reconsideration are respectfully requested in view of the following Remarks.

35 U.S.C. §§ 102 and 103

The Office Action rejects claims 4, 8, 10-19, 21 and 31 under 35 U.S.C. § 102 over Kamiyama U.S. Patent 5,993,391 ("Kamiyama"), and claims 20 and 25-30 under 35 U.S.C. § 103 over Kamiyama in view of Weiglhofer et al. U.S. Patent 6,980,210 ("Weiglhofer").

Applicants respectfully traverse these rejections for at least the following reasons.

Claim 31

Claim 31 has been rewritten in independent form without any change of scope.

Among other things, the method of claim 31 includes updating the stereovision ultrasound image at a latency of less than or equal to 200 milliseconds from start of acquisition to display.

The Office Actions states that Kamiyama discloses this at col. 7, lines 22-23.

Applicants respectfully disagree.

The cited text only discusses the time to acquire three-dimensional data items is 100 msec to 300 msec. It does not disclose anything about the latency from start of acquisition to display – which necessarily includes the time to process the data for display.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 31 is patentable over Kamiyama.

Claims 4 and 8

Claims 4 and 8 depend from claim 31 and are deemed patentable for at least the reasons set forth above with respect to claim 31.

Claim 10

Among other things, in the system of claim 10, the stereovision ultrasound image is updated at a rate of greater than or equal to 20 frames per second.

The Office Actions states that Kamiyama discloses this at col. 9, lines 33-34.

Applicants respectfully disagree.

The cited text contains some kind of typographical or grammatical error that renders its exact meaning unclear. However, at most, the cited text only discusses scanning an ultrasound signal at "several tens of frames per second" in the prior art (but not in Kamiyama's system). It does not disclose anything about the rate at which the stereovision ultrasound image is updated. It is further noted that Kamiyama specifically discloses that its system method only process a small fraction (about 1-8%) of the number of frames of scanned data are processed into a displayed image (see, e.g., col. 7. lines 12-21).

Accordingly, for at least these reasons, Applicants respectfully submit that claim 10 is patentable over Kamiyama.

Claims 11-19 and 21

Claims 11-19 and 21 depend from claim 10 and are deemed patentable for at least the reasons set forth above with respect to claim 10.

Claim 20

Claim 20 depends from claim 10 and is deemed patentable for at least the reasons set forth above with respect to claim 10.

Claim 25

Among other things, the system of claim 25 includes a multiplexor to alternately transmit the first and second 2D rendered images to the display unit to generate a stereovision ultrasound image in real time.

The Office Action fairly admits that Kamiyama does not disclose any such multiplexor.

However, the Office Action states that Weiglhofer discloses a 3D real time stereoscopic image processing system that includes a multiplexer and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kamiyama to add Weiglhofer's multiplexer because *"both Weiglhofer and Kamiyama are in the same field of endeavor and it would have allowed the user of Kamiyama to attain depth information with little expense in real time."*

Applicants respectfully disagree.

At the outset, Applicants agree that Weiglhofer discloses a multiplexer MUX1. However, MUX1 in Weiglhofer merely multiplexes disparity values in a coherence detector for executing a disparity-coherence algorithm. Applicants respectfully submit that MUX1 does not alternately transmit any first and second 2D rendered images to any display unit to generate a stereovision ultrasound image in real time. Indeed, Applicants see nothing in Weiglhofer that discloses or suggests any multiplexor alternately transmits first and second 2D rendered images to any display unit to generate a stereovision ultrasound image in real time.

So no combination of Weiglhofer and Kamiyama would ever produce the system of claim 25.

Applicants also respectfully traversed the proposed combination of Weiglhofer and Kamiyama.

Applicants disagree that Weiglhofer and Kamiyama are *"in the same field of endeavor."* Kamiyama is classified in class 345/433; Weiglhofer is classified in class 600/443. Applicants also traverse the suggestion that there would be any motivation for one of ordinary skill in the art to have modified Kamiyama as proposed. There is nothing that suggests that simply modifying Kamiyama to add Weiglhofer's MUX 1 from Weiglhofer's coherence detector would somehow have magically *"allowed the user of Kamiyama to attain depth information with little expense in real time."*

Accordingly, for at these reasons, Applicants respectfully submit that claim 25 is patentable over the cited art.

Claims 26-30

Claims 26-30 depend from claim 25 and are deemed patentable over the cited

art for at least the reasons set forth above with respect to claim 25.

NEW CLAIMS 32-38

New claims 32-35 depend variously from claims 10 and 31 and are deemed patentable for at least the reasons set forth above with respect to claims 10 and 31, and for the various novel features recited therein.


Among other things, the methods of claims 36-38 all include multiplexing between first and second 2D rendered images to generate a multiplexed image signal, and providing the multiplexed image signal to a display unit to generate a stereovision ultrasound image in real time. Applicants respectfully submit that no proper combination of the cited references would produce a method that includes this feature.

CONCLUSION

In view of the foregoing explanations, Applicants respectfully request that the Examiner reconsider and reexamine the present application, allow claims 4, 8, 10-21 and 25-38 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (571) 283.0720 to discuss these matters.

Respectfully submitted,

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